

**UPPER MISSISSIPPI SYSTEM FLOW FREQUENCY STUDY
(UPPER MISSISSIPPI, LOWER MISSOURI, & ILLINOIS RIVERS)
CITIZENS' PUBLIC INVOLVEMENT (P.I.) GROUP MEETING
June 28, 2000**

Final Minutes (Approved 6/20/01)

1. The Citizens' Public Involvement (P.I.) Group held its fifth meeting on June 28, 2000, in St. Louis, Missouri. A meeting agenda is attached (attachment 1). The minutes below are a summary of the discussions that occurred during the meeting and are not verbatim.
2. The meeting began with Chairperson Paul Soyke (Corps of Engineers, Rock Island District) asking attendees to introduce themselves. An attendance list is attached (attachment 2).
3. There were no additions or corrections to the minutes (pending approval) of the December 1, 1999 meeting. It was moved and seconded that the minutes be approved as final. The P.I. Group voted unanimously to approve the motion. A copy of the final minutes will be mailed to each P.I. Group and Task Force member. The final minutes can also be viewed under "Flow Frequency Study" on the Corps of Engineers' web page (<http://www.mvr.usace.army.mil/>).
4. Al Swoboda, (Corps of Engineers, Northwestern Division, Omaha, Nebraska), presented a program on the status of Missouri River Master Plan (see attachment 3), which included a discussion of the schedule for the Master Manual Study, what factors are currently affecting the schedule, a comparison of the 1993 flood flows for three scenarios to the historic operations, and a comparison of the current Northwestern Division's preferred alternative to a plan with a spring rise. Concerns about these issues raised by the P.I. Group were how the public was to be informed of the spring rise. The answer was that the Northwestern Division would notify the public with notices, mailings, meetings, etc. The Corps is in favor of a spring rise, if it is viable. Would the changes created by a spring rise impact viability of certain endangered species? Mr. Swoboda expounded that the Missouri River is basically a set river system and the Fish and Wildlife Service, along with other agencies, wants the Corps of Engineers to increase aquatic bird habitat along the river. How does it impact the Flow Frequency Study? The potential impacts on downstream minor flood events need to have a full analysis on the river's hydrology. The river used to have two naturally occurring rises; this proposal was designed to mimic that. Other concerns were that a lot of farm land would be flooded, and that we needed to look at impacts to schools, fire protection, etc. Bank erosion was an issue; land owners are not compensated for land erosion problems. See attached presentation information and graphs.
5. Jerry Skalak (Corps of Engineers, Rock Island District), was introduced as the Project Manager. We will publish Jerry Skalak's phone and email in the next newsletter.
6. Joe McCormick (Corps of Engineers, Mississippi Valley Division, Vicksburg, MS), gave a discussion on the Project Design Flood for the Mississippi River & Tributaries Project on the Lower Mississippi River. He showed the history and status of the Mississippi River's

average annual precipitation. The common thought is that we have one major flood every seven years, but the reality is that we can have a flood at any time.

7. Arlen Feldman (Corps of Engineers, Institute of Water Resources, Davis, CA)
Presentation at the Public Involvement Meeting, 6/28/00
by Arlen D Feldman, Hydrologic Engineering Center, USACE

Assumptions being made for the Upper Miss Flood Frequency Study were summarized as follows.

A. Period of Record

The period 1898-1998 was chosen because: land use was relatively consistent, the period of record flows can be adequately adjusted for the effects of channelization by using hydraulic models, and the long period of record available greatly reduces the statistical significance of the historic floods in the flood frequency analysis.

B. Climate Change

The climate for the period of record, 1898-1998 is assumed to be stationary, i.e., not significantly changing. The analysis by the Institute for Water Resources (IWR) showed possible trends for some stations but no clear climate change trend for this period. IWR's recommendation was to assume that the period of record was stationary given the difficulty in distinguishing a climatic trend from overall climatic variability. Consequently, standard flood frequency statistical analysis method will be used to capture the overall variability in the flood record which in fact may be influenced by some climate non-stationarity.

C. Unregulated Flow Frequency

The log-Pearson type 3 analytical frequency distribution will be used for the unregulated (without dams) flow-frequency analysis. Several new analytical distributions and parameter estimation methods were evaluated using the period of record. Significant differences between the application of the log-Pearson and other distributions were not found and hence it was decided to continue to use this standard distribution. The 'regional shape' factor, skew, is important and much analysis is going into determining areas of like shape.

D. Regulated Flow Frequency

The regulated flow frequency curve will be determined using a regulated vs. unregulated flow relationship (determined from UNET river-hydraulic flood routings) and the unregulated frequency curve. There are problems in obtaining the new channel and floodplain geometry; St. Louis District is working with the contracts to clear up the problems. In the UNET flood routings, the levees will be assumed to fail when water overtops the levee.

The Corps welcomes the assistance of the states and local governments, and landowners in performing quality control of the new floodplain digital elevation

model data. Recommendations for points of contact should be submitted to the Corps.

E. Interpolation of Flow Statistics Between Gages

The Technical Advisory group recommended estimating the mean and standard deviation as a function of drainage area and the skew from regionally consistent values.

F. Regulated Stage Frequency

Risk and uncertainty will be used in the frequency analysis per current Corps requirements. Corps certification of levees for FEMA will be according to the existing procedure for certification where levee height has been determined by risk analysis.

8. Rolf Olsen (Corps of Engineers, Institute for Water Resources) did a presentation on Climate Changes and their effect on agriculture, forest vegetation, wetlands, and potholes using historical records and simulations in a computer program. They looked at particular watersheds in localized areas, and based the study on small watersheds. What they found was that there wasn't much correlation between weather and flooding. Trying to predict the weather over the next 100 years is highly unreliable; different studies had different results. The only thing that most of the studies agreed upon was that temperatures are going to climb somewhat by the end of the century.
9. Public Meeting Format Draft Plan for 2001. The P.I. Group discussed a proposed draft plan for upcoming public meetings. Closer to the meeting dates, the format may be modified and will be fine-tuned to best accomplish the purpose and goal of the meetings. A meeting announcement will be mailed to those on the Flow Frequency Study mailing list and will be announced via news releases well in advance of the meeting dates. The draft plan follows:

PURPOSE:

- The purpose of the public meetings is to explain the reason for and the results of the Flow Frequency Study to the general public who may be affected by the results.

GOAL:

- The goal of the meetings is to try to assure that the public understands the results and how they may be directly impacted by any changes.

LOCATIONS:

- The meetings will be held along the Mississippi, Missouri, and Illinois Rivers in several communities throughout the study area. The number and locations of meetings will be determined by the severity of the impacts to a particular region.

TIMEFRAME:

- Meetings are estimated to be held in early fall 2001 to December 2001.

FORMAT:

- The meetings will start with an open house at 6:30 p.m.
- There will be tables and displays with maps of the study area and profiles that can be easily related to the maps.
- The profiles will show the historic elevations and frequencies and the new ones. They will also show the modern record flood with that old and new frequency.
- People will be encouraged to look at the displays and to ask questions. They should be able to relate where they live to the maps and profiles.
- At 7:30 p.m., there will be a formal presentation about the study, its background, the assumptions, and the results. There should also be a discussion about what the results mean to each area and for flood insurance and other purposes.
- Following the presentation, there will be a question and answer period. It is expected that representatives from FEMA, the state the meeting is in, and some members of the PI Group will be present.
- PI Group representatives should be introduced at each meeting with a brief explanation of their function. Where possible and feasible, they should answer some of the questions.
- After the question and answers, the displays should be available for follow-up explanations.
- Questions and answers, and major comments should be documented.

The PI Group doesn't expect a great turn out from the public. It is suggested that we hold the meetings at locations about every 100 miles, so that people won't have to travel too far to attend a meeting. The funding is still in question and will be discussed at the next meeting. The following recommendations were made by the P.I. Group:

- a. Use a paper spread sheet rather than a computer simulation.
 - b. Put together a generic table of definitions to help with public awareness, such things as what a "100 year event" means, etc.
 - c. Make a graphical representation of impacts for 100-, 200-, and 500-year events.
 - d. Have a list of questions that can be anticipated, such as: "Will my levee fail?" "Is there money available?" Have the answers to the public ahead of time.
10. Based on the results of a survey of the P.I. Group, it appears that the best location for the Citizens' Public Involvement Group meetings is in St. Louis.
 11. S.K. Nanda (Corps of Engineers, Rock Island District) and Earl Eiker, (Corps of Engineers Headquarters, Washington, D.C.), as well as other members of the technical meeting, joined our meeting. S.K. gave an overview of the project to date. If a levee is damaged or breached, the Corps will rebuild it to its current specifications; we cannot improve upon it. Everyone is responsible for their own upgrades and must meet state requirements.
 12. The P.I. Group's report to the Task Force: The Public Involvement Group would like to see an authorization to update the flow-frequency relationships after major flood events. The group concurred with the public meeting format and provided suggestions for enhanced

information. They expressed concern about the availability of data disks. Would like a schedule of availability. They would also like basic contours for checking levees. They expressed concern about having a sufficient number of public meetings to reach the affected publics. UMIMRA is concerned about the “no overtop assumptions.” The minimum should be no overtopping on convergence at U.S. Army and Interstate bridges where major infrastructure exists. Levees will not be allowed to overtop. They would like to have specific topographic data available on compact disc from each district. They would like to see public hearings or meetings, with enough of them to inform the general public, and that they be joint meetings with representatives from the Federal Emergency Management Agency available to answer questions.

13. The agenda for the next meeting will include public involvement question and answer session; a report about the review process; a definition of potential regulatory impacts, especially before we finish the comprehensive report; status of assumptions, what are the important elements; and P.I. Group suggestions for input to the newsletter.
14. An agenda will be sent to the Citizens’ Public Involvement Group members before the next meeting and the P.I. Group will be asked to comment on the agenda items.

JACQUELINE E. CHANDLER
Acting Recording Secretary

Attachments

